

## **REMARKS/ARGUMENTS**

Applicants acknowledge receipt of the Office Action dated August 13, 2003. In that action the Examiner: 1) lodged an "Election/Restriction" alleging three different species; 2) lodged a double patenting rejection with regard to previous elected claims and application serial no. 10/025,157; and 3) rejected claims 1-19 and 30-37 as allegedly invalid under 35 U.S.C. 112, first paragraph.

With this action, Applicants cancel claims 20-29 and 38-57 in favor of those same claims in related applications. Reconsideration is respectfully requested.

### **I. STATUS OF RELATED APPLICATIONS**

This application is a continuation of application Serial No. 10/025,157 (hereinafter the '157 application). The current application and the '157 application are identical, save that the '157 application was inadvertently filed without drawing Figure 5. The current application, though later filed, was first examined by Examiner Le in Art Unit 2862. The '157 application was later examined by Examiner Nelson Moskowitz in Art Unit 3663. Examiner Le initially entered a three-way restriction requirement, and rejected all the claims as allegedly unpatentable under 35 USC § 112, first paragraph. Examiner Moskowitz entered a first action allowance on the same claims. The art cited by each of the Examiners Le and Moskowitz are not identical.

Thus, in the present case, Applicants cancel claims 20-29 and 38-57 in favor of those same claims before Examiner Moskowitz in Group Art Unit 3663. Applicants also submit concurrently herewith an Information Disclosure Statement and Form PTO-1449 to cite to Examiner Le non-duplicative art identified by Examiner Moskowitz in the co-pending case. Although not particularly relevant to the application at hand, Applicants have also filed a

continuation of the '157 application which: cancels claims 1-19 and 30-37 in favor of those same claims in the current case; and cites non-duplicative art found by Examiner Le.

## **II. DOUBLE PATENTING REJECTIONS**

The Office Action dated August 13, 2003 contains a double-patenting rejection over claims 1-19 and 30-37 in the '157 application. As noted above, Applicants have filed the continuation of the '157 application which pursues only the non-elected claims of the present application.

## **III. ELECTION/RESTRICTIONS**

In the Office Action dated February 6, 2003, the Examiner presented a three-way restriction requirement in which the claims of the current application were restricted as follows:

- I. Claims 1-19 and 30-37, drawn to measurement system in a specific environment for formation characteristics, classified in class 702, subclass 11.
- II. Claims 20-29, drawn to seismic prospecting using shear wave, classified in class 367, subclass 75.
- III. Claims 38-57, drawn to seismic prospecting related to phase determination, classified in claims 367, subclass 48.

Office Action dated February 6, 2003, page 2, paragraph 1. During a telephone conversation, Applicants elected Group I (claims 1-19 and 30-37) and an Office Action issued dated February 6, 2003. In a Response to the Office Action dated May 2, 2003, Applicants confirmed the verbal election of the Group I claims and presented arguments as to why the restriction requirement is improper.

The Office Action dated August 13, 2003, to which this paper responds, presents verbiage regarding an election/restriction as follows:

- I. A method of determining characteristics of an anisotropic earth formation based on source waveform and source wavelet analysis (page 4, lines 14-22).
- II. A method of determining a velocity of fast polarized and slow polarized shear waves (page 4, lines 1-3; figures 1-2).
- III. A method of determining an orientation of fast and slow polarized shear waves (page 4, lines 1-3; figures 1-2).

Office Action dated August 13, 2003, paragraph 1, page 2. At first blush, it appears that the Office Action dated August 13, 2003 is further restricting the claims previously elected (claims 1-19 and 30-37). However, the Office Action goes further to states:

During a telephone with Mark Scott on 1/23/03 a provisional election was made with traverse to prosecute the invention of I, claims 1-19 and 30-37. Affirmation of this election must be made by applicant in replying to this Office Action.

Office Action dated August 13, 2003, page 3, paragraph 6. This quotation would lead one to believe that, in spite of the differences in terminology, the restriction requirement are in actuality the same.

Applicants respectfully request clarification as to whether the election/restriction in the current action is merely duplicative of the previous election/restriction in the Office Action dated February 6, 2003, and responded to by Response Dated May 2, 2003, or if indeed the claims from the elected Group I are being further restricted by the present restriction requirement.

#### **IV. SECTION 112 CLAIM REJECTIONS**

In responding to the previous office action, Applicants submitted the declaration of Dr. Cheng (which is also attached to this response for convenience). Dr. Cheng has asserted, and the assertion has not been refuted by the Examiner, that one having ordinary skill in this matter has a doctorate degree and at least five years experience. Declaration of Dr. Cheng, paragraph 3. Further, Dr. Cheng states he has the equivalent of a Ph.D. and twenty-three years experience.

See Declaration of Dr. Cheng, paragraph 2. Thus, Dr. Cheng has at least ordinary skill in the relevant art.

Important to the issue of alleged non-enablement, Dr. Cheng states:

Based on my education and experience as of December 21, 2001, and the disclosure of the Application, I could design and make an operable acoustic logging system as described in the Application with little experimentation.

Declaration of Dr. Cheng, paragraph 5: In spite of this evidence by one of ordinary skill in the art, the Examiner maintains the 35 U.S.C. §112, First Paragraph rejection without presenting evidence.

**[T]he examiner should specifically identify what information is missing and why one skilled in the art could not supply the information without undue experimentation.**

MPEP 2164.04 (emphasis added). Dr. Cheng has at least ordinary skill and has stated that he could build such a system with little experimentation. If the Examiner believes himself to likewise have at least ordinary skill, Applicants specifically request the submission of a Declaration or Affidavit describing how and where the Examiner obtained such experience.

The non-enablement rejection in the Office Action dated August 13, 2003 appears to be based on an alleged failure “to mathematically provide a physical description of the transfer function... .” Office Action dated August 13, 2003, page 6. Dr. Cheng’s Declaration states that a simple transfer function is described in the specification: “This clearly means that the transfer function can be a simple ‘travel time equals distance divided by speed’ calculation.” Declaration of Dr. Cheng, paragraph 6. Dr. Cheng further states that information regarding transfer function is readily available, and cites several publications. Declaration of Dr. Cheng, paragraph 7. Applicants provide in the Information Disclosure Statement submitted concurrently herewith one of those article titled “Elastic wave propagation in a fluid-filled borehole and synthetic acoustic

logs.” Equation 30 in the attached article is an example of a transfer function known to those having ordinary skill. “A patent need not teach, and preferably omits, what is well known in the art.” MPEP 2164.01.

Based on the foregoing, Applicants respectfully submit that the claims at issue do not suffer from enablement difficulties, and should therefore be allowed.

### **III. CONCLUSION**

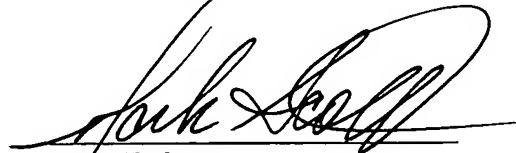
Applicants respectfully request reconsideration and allowance of the pending claims. If the Examiner feels that a telephone conference would expedite the resolution of this case, he is respectfully requested to contact the undersigned.

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future.

App. No. 10/027,749  
Amdt. Dated November 6, 2003  
Reply to Office Action of August 13, 2003

If any fees are inadvertently omitted or if any additional fees are required or have been overpaid, please appropriately charge or credit those fees to Conley Rose, P.C. Deposit Account Number 03-2769.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mark E. Scott', written over a horizontal line.

Mark E. Scott  
P/TO Reg. No. 43,100  
CONLEY ROSE, P.C.  
P.O. Box 3267  
Houston, TX 77253-3267  
(713) 238-8000 (Phone)  
(713) 238-8008 (Fax)